

ABSTRACT

Galvannealed steel sheet simultaneously able to achieve excellent workability and high strength and a method of production of the same are provided as an objective, in particular high strength galvannealed steel sheet excellent in workability, comprising high strength steel sheet containing, by mass%, C: 0.05 to 0.15%, Si: 0.3 to 2.0%, Mn: 1.0 to 2.8%, P: 0.03% or less, S: 0.02% or less, Al: 0.005 to 0.5%, and N: 0.0060% or less and a balance of Fe and unavoidable impurities, where, when %C, %Si, and %Mn respectively represent the C, Si, and Mn contents,  $(\%Mn)/(\%C) \geq 12$  and  $(\%Si)/(\%C) \geq 4$  being satisfied, on the surface of which having a galvannealed layer containing Al: 0.05 to 0.5 mass% and Fe: 5 to 15 mass% and a balance of Zn and unavoidable impurities, said steel sheet satisfying a relationship of tensile strength  $F$  (MPa) and elongation  $L$  (%) of  $L \geq 52 - 0.035 \times F$ .